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ABSTRACT

This working paper discusses the critical role that higher education in the United States and Mexico must play since the implementation of the North American Free Trade Agreement (NAFTA). The paper gives an overview of recent transformations in areas of economic development and business needs which require that higher education better prepare students to compete in the global workforce. These include changes in the economies of the U.S. and Mexico since World War II, with world leadership for the U.S. and an inward-looking development path for Mexico. The rapid collapse of Mexico's oil economy in 1981 led to a full-scale economic crisis. Higher education institutions in both countries are now responding to new global market challenges. In response to changing business and workforce training needs and advances in educational technology and communications, these institutions are working to implement curricular reform, increase access to higher education, and keep higher education affordable. The paper concludes with initiatives currently underway and gives recommendations for higher education policy makers for the development of a competitive and culturally aware workforce. (Contains 41 references.) (JLS)

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ED 410 828

Understanding the Differences

A Working Paper Series on Higher Education in the U.S. and Mexico

Working Paper #4

Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA

by

Elizabeth J. Santillanez

HE 030 402

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Working Paper #4:

Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA

by Elizabeth J. Santillanez

"Understanding the Differences"

A Working Paper Series on Higher Education in the U.S. and Mexico

Western Interstate Commission for Higher Education
P.O. Drawer P
Boulder, Colorado 80301-9752 U.S.A.

Western Interstate Commission for Higher Education

The Western Interstate Commission for Higher Education (WICHE) is a public, interstate agency established to promote and to facilitate resource sharing, collaboration, and cooperative planning among the western states and their colleges and universities. Member and affiliate states include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

WICHE's broad objectives are to:

- Strengthen educational opportunities for students through expanded access to programs,
- Assist policymakers in dealing with higher education and human resource issues through research and analysis,
- Foster cooperative planning, especially that which targets the sharing of resources.

In 1993, WICHE, working in partnership with the Mexican Association for International Education (AMPEI) developed a binational project to facilitate educational interchange and the sharing of resources across the western region of the U.S. and with Mexico. This publication was developed as a resource for the project and as part of a series entitled "Understanding the Differences," created under the direction of WICHE's Special Projects and Research and Policy Analysis Units.

Funding for the working paper series was provided by The Ford Foundation. Other publications in the series include:

- Working Paper #1: *Policy Approaches to Evaluation and Incentive Funding in the U.S. and Mexican Higher Education* (Publication Number 2A261)
- Working Paper #2: *Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues* (Publication Number 2A262)
- Working Paper #3: *The Educational Systems of Mexico and the United States: Prospects for Reform and Collaboration* (Publication Number 2A263)
- Main comparative essay: *Understanding the Differences: An Essay on Higher Education in Mexico and the United States*—forthcoming, 1995. (Publication Number 2A265).

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Foreword

The process of approving and implementing the North American Free Trade Agreement (NAFTA) served to galvanize the interest of the higher education establishments of Mexico and the United States about the opportunities and challenges implicit in the treaty. The trilateral meetings in Vancouver in 1993, the International Symposium on Higher Education and Strategic Partnerships that were based on an earlier Wingspread conference, and the Western Interstate Commission for Higher Education's (WICHE) U.S.-Mexico Educational Interchange Project that has been undertaken with Mexico's Asociación Mexicana para la Educación Internacional (AMPEI), are testimony to the greater formal concern in Mexico and the United States regarding the role of higher education in the economic integration in the North American region. Elizabeth J. Santillanez' essay "Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA" is one important product of that WICHE-AMPEI interaction.

Current national and broad regional initiatives are able to build on a base of binational higher education activities that came out of the activities of individual scholars and institutions, scholarly organizations and consortia, private U.S. foundations, and the two national governments. A strong tradition of Latin American and Mexican studies in the United States in the post World War II period greatly enhanced contacts between Mexican and U.S. scholars and advanced students. This led to the development of significant expertise on Mexico in many U.S. universities and it also paved the way for emergence of a number of consortia that focused on Mexican studies. Most important were PROFMEX (The Consortium for Research on Mexico) that was established by Mexican and U.S. scholars in 1980 and the University of California Consortium on Mexico and the United States (UC MEXUS) that was established in 1982 to facilitate collaborative research and graduate training activities with Mexican universities. These, and other groups such as the Association of Borderlands Scholars, have been quite successful in promoting U.S. and Mexican higher education interactions.

Historically, development of systematic programs in Mexico for the study of the United States has been weak, despite the enormous political and economic importance of the United States for Mexico. The William and Flora Hewlett Foundation played a key role in helping Mexican universities address needs in this area. Beginning in 1986 with a grant to El Colegio de México to develop a program on the United States, Hewlett went on to fund related activities at the Universidad Nacional Autónoma de México, El Colegio de la Frontera Norte, the Universidad de Guadalajara, the Instituto Tecnológico y de Estudios Superiores de Monterrey, and

ITAM. The Hewlett initiative produced an important increase in the capacity of Mexican universities to undertake research about the United States and the bilateral relationship and greatly increased collaborative U.S.-Mexican social science research.

One outgrowth of the establishment of these centers and programs was a meeting on "Strengthening United States-Mexico Studies," convened at Wingspread in July 1990 by the Hewlett and Johnson Foundations.[1] The meeting included project directors from Mexico and the United States, as well as representatives from the MacArthur, Tinker and Ford Foundations. The wide ranging discussions at Wingspread touched on many of the issues and concerns that were later to emerge in the context of NAFTA.

The Ford Foundation also played an important role in stimulating U.S.-Mexican higher education collaboration. From the early 1980s, Ford was particularly successful in funding research and outreach activities that involved teams of scholars from both countries and that led to ongoing binational linkages. Recent examples include the funding of two PROFMEX urban services projects in the Ciudad Juárez-El Paso region and the Tijuana-San Diego area, ongoing support for Mexican scholars to attend the annual Association of Borderlands Scholars/ Western Social Sciences Association meetings, and financing for the development of the PROFMEXIS electronic information system link to Mexican, U.S. and other scholars. And Ford has continued its support for enhanced higher education cooperation through the WICHE/AMPEI project.

The Mexican and U.S. governments began in the late 1980s to support and facilitate more robust bilateral higher educational activities. In part this was a reaction to the Mexican economic crisis of the 1980s, in part it reflected the new spirit of openness and cooperation that accompanied the economic restructuring of the Mexican economy under the De la Madrid and Salinas presidencies. Development of a Border Fulbright Program, enhancement of the National Science Foundation-Consejo Nacional de Ciencias y Tecnología agreement, and the establishment of the Mexico-United States Foundation for Sciences are examples of these growing efforts. Perhaps most important was the creation in 1990 of the U.S.-Mexico Commission for Education and Cultural Exchange by the two governments with significant support by the Rockefeller Foundation, the Mexican Council for Culture and the Arts, and the Bancomer Cultural Foundation.

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[1] Paul Ganster, "Wingspread Meeting on United States-Mexico Studies," *Mexico Policy News*, 5 (Summer 1990).

All these activities provided a strong base for binational cooperation in higher education. These efforts supported better study and analysis of the other country, collaborative research, and the movement of students and faculty from one country to the other. But, by in large, they did not produce the types of close interactions that would lead to the involvement of large number of students from both countries, a theme that emerged in the various Trilateral Commission discussions.

Somewhat neglected in the great burst of activities by the national educational establishments has been the rich experience of Mexican and U.S. universities in the border region. Located far from the national centers of power, and often from policymakers at the state level, border universities have strong traditions of cooperation with counterparts on the other side of the border. It is along the 2,000-mile border where the greatest interpenetration of the Mexican and U.S. higher education systems has occurred. There, most of the region's population is concentrated in densely populated twin cities so that meaningful binational higher education cooperation can often be accomplished with little cost and a short commute across the border.

Close binational collaboration in the border zone goes back many decades, but grew significantly in the 1980s when Mexican border universities expanded and increased the number of their faculty who had advanced degrees and research experience. Most of this interaction took place without outside funding and was financed through local resources. Mexican economic liberalization, by the late 1980s, gave a great stimulus to transborder trade, which prompted more development of binational education cooperation. The NAFTA brought more attention to programs and mechanisms already in place, so that border leaders are now not only concerned about the new educational requirements related to economic integration, but also the challenges of managing an increasingly integrated binational region.

Under these circumstances, border higher education institutions have developed practices and models that should be of interest to authorities in the national education establishments. Most active in binational collaborative efforts have been the universities in the largest twin city pairs of the border, Tijuana-San Diego, and in the second largest, El Paso-Ciudad Juárez. Also, over the years, the Arizona-Sonora region has developed excellent binational cooperation in higher education, and more recently, universities of the lower Rio Grande in Texas and the neighboring universities in Mexico have greatly increased transborder linkages. Other examples drawn from these border experiences illustrate the innovativeness

and intensity of the unfolding bilateral activities in higher education in the transborder region.

In the El Paso-Ciudad Juárez region, for example, the University of Texas at El Paso (UTEP) has for some years provided waivers of out of state fees for students from neighboring Chihuahua so that today about half of the Mexican students studying in the United States are at UTEP. Joint research projects involving UTEP and faculty from Ciudad Juárez institutions such as the Universidad Autónoma de Ciudad Juárez, the Instituto Tecnológico de Ciudad Juárez, the local office of El Colegio de la Frontera Norte, and the local campus of ITESM are regularly undertaken, and often involve participants from New Mexico State University in nearby Las Cruces. Faculty from the Chihuahua institutions frequently teach courses at UTEP and UTEP has headed a regional effort to discuss important issues for binational higher education cooperation such as accreditation.

Similar activities are ubiquitous in the Tijuana-San Diego region, but there are also a number of interesting new initiatives, principally in the area of shared degree programs. San Diego State University (SDSU), in cooperation with Southwestern College (a local community college), the Universidad Autónoma de Baja California, and the Centro de Enseñanza Técnica y Superior (CETYS), launched in 1994 an international dual degree program in international business. Under this program, students study at institutions on both sides of the border and at the end of the course of study, receive a *licenciatura* from the Mexican university and a bachelor's degree from SDSU. The dual degree approach avoids the difficult task of harmonizing the two accreditation systems, yet provides students with an immediate opportunity for a truly international education. AT SDSU, other efforts are moving forward to explore possibilities of a cooperative master's degree with El Colegio de la Frontera Norte in economics and with several institutions in Ensenada in the area of geology and geophysics.

Although many other examples are available regarding close transborder cooperation in the border region, these should suffice to make the point that there is significant expertise and experience in the border's universities that could compliment the "top down" efforts now under way. The many grassroots experiences of universities in the borderlands need to be incorporated more effectively into the broader efforts to link higher education in Mexico and the United States to take advantages of the opportunities and to meet the challenges presented by North American integration.

Paul Ganster
San Diego State University

Preface

A major obstacle to binational educational interchange across the U.S.-Mexican border is that educational policymakers and practitioners lack familiarity with the structures and issues of each other's educational systems. There are often assumptions on both sides that the two systems function similarly. To date, only limited information exists on educational policy issues affecting the United States and Mexico, particularly in a comparative context.

In an effort to fill that void, and with the encouragement of The Ford Foundation Director for Education and Culture, Alison Bernstein, and the Foundation's support, WICHE has developed a series of five reports, entitled *Understanding the Differences*. The series analyzes the major policy issues and differences in each country, so that meaningful discussions among higher education leaders and policymakers may occur toward the goal of developing new binational initiatives.

WICHE's *Understanding the Differences* series includes:

- Working Paper #1: *Policy Approaches to Evaluation and Incentive Funding in U.S. and Mexican Higher Education*, by Peter Ewell and Rollin Kent. This paper explores the growing desire shared by the two nations to obtain a significant "return on investment" in postsecondary education. The authors establish a context for comparison within Mexico and the United States and discuss the challenges and central policy dilemmas that each country faces as it attempts to implement the policy tools of evaluation and incentive funding. Past experiences and future directions for accountability and categorical funding mechanisms are explored.

- Working Paper #2: *Higher Education Faculty in Mexico and the United States: Characteristics and Policy Issues*, by Cheryl Lovell and Dolores Sánchez Soler. This paper describes and compares Mexican and U.S. faculty characteristics and conditions, including total number of faculty, student-teacher ratios, full- versus part-time status, rank, tenure, average salaries, gender and ethnicity, and union membership. Several contemporary policy issues are explored including faculty evaluation, workload and productivity, curriculum reform, faculty involvement with the business community, faculty development, and implications that NAFTA will have for faculty on both sides of the border. The paper concludes with some suggested areas for collaborative efforts of faculty in the two countries.

- Working Paper #3: *The Educational Systems of Mexico and the United States: Prospects for Reform and Collaboration*, by JoAnn Canales, Leticia Calzada Gómez and Néllyda Villanueva. This paper describes the sequential processes of education (from basic to higher education) in Mexico and the U.S. as a basis for understanding the relationships between the various levels of education. It analyzes the fragmented nature of the educational systems common to both countries and outlines possible solutions for integrating the different systems. Also included are brief overviews and examples of national, state and local collaborative relationships. The paper concludes with a discussion of ways to nurture and enhance binational collaborative relationships.

- Working Paper #4: *Higher Education's Responsiveness in Mexico and the United States to a New Economy and the Impacts of NAFTA*, by Elizabeth Santillanez. This paper discusses the critical role that higher education must play as the U.S., Mexican and Canadian markets become more integrated since the implementation of NAFTA. The paper gives an overview of

recent transformation of economic developments and business needs which require that higher education better prepare students to compete in the global workforce. It describes initiatives currently underway and gives recommendations for higher education policymakers to consider as they develop a workforce which is competitive and culturally-aware.

- The final comparative report: *Understanding the Differences: An Essay on Higher Education in Mexico and the United States*, by Judith I. Gill and Lilian Alvarez de Testa (forthcoming). The goal of this comparative report on higher education in Mexico and the United States is to provide an understanding of the major issues and differences in each country so that meaningful discussions may occur towards the development of new binational programs. While fully acknowledging the distinct contexts particular to each country, the report analyzes shared factors which contribute to the need for reform and change, including a perceived decline in educational quality; increasing enrollment demands; increased social, economic and cultural diversity within the workforce; rapid advances in technology; and increased and global economic competition.

WICHE hopes that this series will foster improved understanding of significant higher education issues in both countries and, over time, lead to new cooperative efforts to increase education opportunities in both nations.

WICHE thanks Alison Bernstein and Norm Collins of The Ford Foundation for their generous support of the general WICHE/AMPEI binational project, and for their recognition of the importance of United States-Mexico policy studies. We are also indebted to Judith I. Gill, former Program Director of WICHE's Research and Policy Analysis Unit, now serving as Associate Vice Chancellor for the Massachusetts Higher Education Coordinating Council. Gill identified the pertinent issues in binational education across our shared border, directed the research component of the project, and molded the information into a highly useful comparative context. Thanks also go to Sylvia Ortega Salazar, president of AMPEI, and Lilian Alvarez de Testa of UNAM who offered important insights in reviewing the papers.

WICHE acknowledges the binational teams of authors: Peter Ewell and Rollin Kent; Cheryl Lovell and Dolores Sánchez Soler; JoAnn Canales, Leticia Calzada Gómez and Néllyda Villanueva; and, Elizabeth Santillanez and her advisor, Paul Ganster. The authors eagerly worked through language barriers, cultural differences and logistical obstacles, in the spirit of true cross-border cooperation and exchange, which should characterize a project of this nature. We hope their cooperative efforts will inspire other researchers to pursue future binational collaborations.

Paula Palmer provided valuable editorial assistance as the papers were developed. Thanks also to WICHE staff members Robin Zúñiga (review of statistics); Debby Jang and Cherie Pederson (graphics support); Kelly Zweifel (library research); and Mary Ellen Keller (production). And finally, WICHE acknowledges Jere Mock for managing the project and her assistance in editing the series, and Margo Schultz for her many contributions including coordinating the communications with the authors and layout of the final manuscripts.

Richard W. Jonsen
Executive Director

Western Interstate Commission for Higher Education
Boulder, Colorado (USA)
April 1995

List of Abbreviations

ACE	American Council on Education	Consejo Estadounidense para la Educación Superior
AFT	American Federation of Teachers	Federación Estadounidense de Profesores
ANUIES	National Association of Universities and Institutions of Higher Education	Asociación Nacional de Universidades e Instituciones de Educación Superior
AMPEI	Mexican Association for International Education	Asociación Mexicana para la Educación Internacional
CQAIE	Center for Quality Assurance in International Education	Centro para la Evaluación de la Calidad de la Educación Internacional
APEC	Asia Pacific Economic Cooperation	Organización para la Cooperación Económica del Asia-Pacifico
AAUP	American Association of University Professors	Asociación Estadounidense de Profesores Universitarias
CAPFCE	Federal Administrative Committee for the Construction of Schools	Comité Administrativo Federal para la Construcción de Escuelas
CETE	Educational Television Training Center	Centro de Entrenamiento en el uso de la Televisión Educativa
CIIES	Interinstitutional Committees for the Evaluation of Higher Education	Comites Interinstitucionales para la Evaluación de la Educación Superior
CINVESTAV	Center for Research and Advanced Studies	Centro de Investigación y Estudios Avanzados
COEPES	State Coordinating Committee for Higher Education Planning	Coordinación Estatal para la Planeación de la Educación Superior
CONACYT	National Council for Science and Technology	Consejo Nacional de Ciencia y Tecnología
CONALEP	National College of Professional Technical Education	Colegio Nacional de Educación Profesional Técnica
CONAEVA	National Commission for the Evaluation of Higher Education	Comisión Nacional para la Evaluación de la Educación Superior
CONPES	Mexican National Coordinating Board for Higher Education Planning	Consejo Nacional para la Planeación de la Educación Superior
CORPES	Regional Coordinating Council for Higher Education Planning	Coordinación Regional para la Planeación de la Educación Superior
COSNET	Council for the National Sytem of Education Technology	Consejo del Sistema Nacional de Educación Tecnológica
CUPIA	Council of Public Universities and Similar Institutions	Consejo de Universidades Públicas e Instituciones Afines

ECS	Education Commission of the States	Comisión Educativa de los Estados
FIPSE	Funds for the Improvement of Postsecondary Education—U.S. Department of Education	Fondo para el Mejoramiento de la Educación Media Superior y Superior — Departamento de Educación de los Estados Unidos
FLACSO	Latin American School of Social Sciences	Facultad Latinoamericana de Ciencias Sociales
FOMES	Fund for Higher Education Modernization	Fondo para la Modernización de la Educación Superior
GATT	General Agreement on Tariffs and Trade	Acuerdo General de Aranceles y Comercio
ICED	International Council for Educational Development	Consejo Internacional para el Desarrollo Educativo
IIE	Institute of International Education	Instituto para la Educación Internacional
IRSC	Institute for Regional Studies of the Californias	Instituto de Estudios Regionales de las Californias
ITESM	Monterrey Institute of Technology	Instituto Tecnológico y de Estudios Superiores de Monterrey
NAFSA	Association of International Educators	Asociación de Educadores Internacionales
NAFTA	North American Free Trade Agreement	Tratado de Libre Comercio de Norteamerica (TLC)
NCHEMS	National Center for Higher Education Management Systems	Centro Nacional de Sistemas Administrativos para la Educación Superior
NEA	National Education Association	Asociación Nacional de Educación
NSF	National Science Foundation	Fundación Nacional para la Ciencia
OECD	Organization for Economic Cooperation and Development	Organización para la Cooperación Económica y el Desarrollo
PROFMEX	Consortium for Research on Mexico	Consorcio para Investigación sobre México
PROIDES	Integral Program for the Development of Higher Education	Programa Integral para el Desarrollo de la Educación Superior
SEIS-ITESM	Satellite Interactive Education System-ITESM	Sistema Satelital de Educación Interactiva
SEP	Mexican Ministry of Education	Secretaría de Educación Pública
SESIC	Undersecretaryship of Higher Education and Scientific Research	Subsecretaría de Educación Superior e Investigación Científica
SHEEO	State Higher Education Executive Officers	Ejecutivos Estatales de Educación Superior

SINAPPES	National System for Long-term Planning in Higher Education	Sistema Nacional para la Planeación Permanente de la Educación Superior
SNI	National System of Researchers	Sistema Nacional de Investigadores
SNTE	Mexican National Teachers' Union	Sindicato Nacional de Trabajadores de la Educación
SPRE	State Postsecondary Review Entities	Comisiones Estatales de Evaluación de Instituciones de Educación Media Superior y Superior
SUPERA	National Program for the Advancement of Academic Personnel	Programa Nacional de Superación del Personal Académico
UABC	Autonomous University of Baja California	Universidad Autónoma de Baja California
UAM	Autonomous Metropolitan University	Universidad Autónoma Metropolitana
UANL	Autonomous University of Nuevo Leon	Universidad Autónoma de Nuevo León
UNAM	National Autonomous University of Mexico	Universidad Nacional Autónoma de México
USDE (DOE)	United States Department of Education	Departamento de Educación de los Estados Unidos
USIA	United States Information Agency	Agencia de Información de los Estados Unidos
WCET	Western Cooperative for Educational Telecommunications (at WICHE)	Cooperativa Occidental para la Telecomunicación Educativa
WICHE	Western Interstate Commission for Higher Education	Comisión Interestatal Occidental para la Educación Superior

Introduction

The North American Free Trade Agreement (NAFTA) paves the way for the integration of markets in the United States, Canada and Mexico. Higher education has a critical role to play in this integration process to create a workforce capable of participating cooperatively and competitively in the global economy. Changes in market place demands and opportunities initiated by NAFTA require training a workforce with upgraded professional, technical, and social skills. NAFTA has emerged as a result of dramatic changes in the economies of both Mexico and the United States during the post-World War II era; the Agreement is part of a larger ongoing process of economic globalization.

Several years ago, in anticipation of an international agreement that would formally recognize the reality of an economy that is already tri-national, higher education institutions and policymakers in the United States, Mexico and Canada began the process of developing policies and programs which could respond to new opportunities and challenges. To lay the groundwork for understanding the relationship between the economy and higher education and the need for change in Mexico and the United States, this paper will first describe the economic changes experienced by the two countries in recent decades. The following section explains how higher education is changing in response to new economic trends and describes the roles of government, business and higher education institutions in the change process. Then, the impact of specific NAFTA provisions on higher education is outlined. Issues requiring continued collaborative action in the two countries are outlined in the concluding section.

Overview of Economic Trends 1950 - 1990s

Changes in the United States Economy Since World War II

The world has experienced dramatic economic and political changes during recent decades. After World War II, a balance of power situation emerged that placed the United States and its allies in the position of protecting their economic and political interests while also helping to rebuild the economies of the nations that lost the war. In the decade following World War II, the United States became the world's technological leader, outpacing its competitors by unprecedented margins.

In 1950, per capita income in the United States was significantly higher than in every European country, and six or eight times higher than in Japan. The U.S. also produced nearly 40 percent of the industrialized world's output; it was the only large industrialized country that was free of balance-of-payment problems (Vernon, 1990).

Forty years later, in the 1990s, the U.S. continues to hold a dominant place in world trade and investment; however, its relative position is substantially reduced. Between 1950 and 1990, the U.S. share of world production decreased to about 27 percent and U.S. merchandise exports (as a percent of world exports) was cut in about half, as Japan's productivity and gross national product increased faster than those of any other industrialized country. There also was a significant change in the U.S. balance of payments. The surpluses of the 1950s were reversed, and the U.S. now imports capital in large amounts to finance its government debt and industrial development (Vernon, 1990). The U.S. economy as a whole has shifted its orientation from goods to services.

In addition to these major economic transformations, the ethnic diversity of the U.S. population has greatly increased (Leveson, 1991); the Cold War has ended; and the world has undergone a profound globalization process. Multinational enterprises and technological advances have changed the dynamics of how world business is conducted. In order to improve the management of global commerce, the United States has joined with other nations to reduce trade barriers through the General Agreement on Tariffs and Trade (GATT), the U.S.-Canada Free Trade Agreement, and the North American Free Trade Agreement (NAFTA).

Recent Economic Changes in Mexico

Since 1950, the Mexican economy has endured a roller coaster ride of ups and downs, compared to the more gradual changes experienced in the United States. Between 1950 and 1970, the Mexican economy was strong, with per capita annual growth rates of 3 to 4 percent, and with an annual inflation rate of about 3 percent (Lustig, 1992).[2]

Throughout the post-World War II period, Mexico followed an inward-looking development path which emphasized rapid industrialization achieved with the assistance of protective trade barriers, and this strategy was relatively successful until 1976. The economic crisis in the mid-seventies was relatively short-lived, and

[2] Nora Lustig's book, *Mexico: The Remaking of an Economy*, provides an in-depth analysis of the Mexican economic situation during recent decades.

the economic picture changed once again with the discovery of massive Mexican oil resources at a time of perceived oil scarcity worldwide. This phenomenon allowed President José López Portillo to support Mexico's economic growth through the use of increased public expenditures which were partly financed by international loans secured with the collateral of Mexico's oil reserves.

In mid-1981 oil prices started to slide, and Mexico's economy began to collapse. Capital flight accelerated as investors lost confidence in Mexico's development strategy. By mid-1982, the peso had been devalued, and nearly half of the country's foreign debt required repayment or refinancing. Following these events, a full-fledged economic crisis occurred, resulting in the nationalization of the Mexican banking system.

Miguel de la Madrid entered office in 1982 in the midst of these circumstances and began a process which would turn the tide of Mexico's economic and political policies. He moved the Mexican economy toward a fiscally conservative strategy emphasizing fiscal austerity, export-led-growth, the privatization of industries (including the re-privatization of the banking industry), and the decentralization of the economy. De la Madrid's policies are viewed as having been largely successful because they placed Mexico on the track toward sustained economic recovery. However, the general public paid an exorbitantly high price. The short-term outcomes of de la Madrid's policies included the loss of real personal income and purchasing power for people of all economic classes due to acute and continuous devaluations of the peso, skyrocketing inflation, and the reduction of government protections such as subsidies for food and other commodities.

On the positive side, the basic principles of de la Madrid's economic strategy were carried forward by President Carlos Salinas de Gortari, and Mexico was regarded as a model of economic success in the developing world. During the Salinas administration, Mexico achieved an average GDP growth rate of about 4 percent per year, after years of negative growth, and inflation was reduced significantly. Mexico's commitment to economic reforms and the liberalization of its trade policies is reflected in the country's decision to join GATT in 1986 and in its recent entry into the OECD (Organization for Economic Cooperation and Development). President Salinas' efforts to bring Mexico into the forefront of economic competition in alliance with the United States and Canada culminated in the ratification of the North American Free Trade Agreement, which he initiated.

During the first year of the implementation of NAFTA, trade among the partners (the United States, Canada and Mexico) increased 17 percent, growing over $50 billion in just one year (U.S. Department of Commerce, 1995). Furthermore, Mexico-U.S. trade grew to record levels (Serrill, 1994). U.S. merchandise exports to Mexico totaled $50.8 billion in 1994, and Mexican merchandise exports to the U.S. grew to $49.5 billion (U.S. Department of Commerce, 1995).

Since early 1995, the Mexican economy has been undergoing a major adjustment due to a decrease of approximately 50 percent in the value of the peso which began in mid-December of 1994. The Mexican crisis sent shock waves throughout the world financial community, and has resulted in a loan guarantee package of approximately $50 billion to Mexico provided by the International Monetary Fund, the United States, and other nations. It is expected that in the short term, Mexico will enter into a recession as it struggles to comply with stiff economic conditions for debt loan guarantee assistance (Foust, 1995).

The Global Trend Toward Economic Integration

In the western hemisphere and throughout the world, countries are recognizing the benefits of free trade as evidenced by the recent approval in the United States, Japan, and other major industrialized countries of a revised 124-nation GATT Agreement, and by the agreement among 18 Pacific Rim nations of the Asia-Pacific Economic Cooperation (APEC) organization to achieve free trade and investment in the Pacific by the year 2020. The integration of the European Community has served as an important precedent for all of these developments.

NAFTA has served as an impetus for the convergence of interests among nations in the western hemisphere to improve trade relations through regional collaboration. When the nations of the Americas met in Miami in December 1994 at the "Summit of the Americas" to discuss how to raise living standards and strengthen democracy in the western hemisphere, the main outcome of the meeting was an agreement to negotiate a Free Trade Area of the Americas (FTAA) by 2005. The area stretches from Alaska to Tierra del Fuego and embraces a potential market of 850 million people.

The turn toward a global economy will work for countries that have educated their citizens to be productive in a global market.

Responses to Changing Economic Conditions by Higher Education in Mexico and the United States

Today, both in the United States and Mexico, higher education institutions are responding to new challenges and opportunities brought about by economic changes and the integration of world markets. In view of changing business and workforce training needs as well as changes in modes of communication and advances in technology and telecommunications, higher education institutions in both countries are working to implement curricular reform, increase access to higher education, and at the same time, keep higher education affordable.

Responses from the Higher Education Establishment. Higher education leaders and policymakers realize that educational services need to respond as effectively as other industries to the changing dynamics of world economies. Business-as-usual attitudes will not work. At a recent meeting of the Education Commission of the States, U.S. Secretary of Education Richard W. Riley referred to the unprecedented "velocity of change" being experienced by all populations and the need for higher education to respond.

In 1992, the Western Interstate Commission for Higher Education (WICHE) completed a two-year study on the relationship of higher education to the economy. The Commissioners, representing higher education leaders and stakeholders in 15 western states, adopted a series of recommendations focused on the dramatic changes which are needed if higher education is to be responsive to a global, technologically oriented economy and a multicultural society. The recommendations are presented in *Meeting Economic and Social Challenges: A Strategic Agenda for Higher Education* (WICHE, 1992). The key points of this document are:

- States must develop a statewide vision for higher education. The vision should be embodied in a strategic agenda that signals a new statewide perspective for higher education. Campus roles and missions, funding policies and priorities, and accountability requirements should be consistent with the goals of the strategic agenda.
- Higher education must make a stronger commitment to undergraduate curriculum reform. Reform efforts must include changes that are critical to preparing graduates for the emerging global and technologically oriented economy and multicultural society.

- Colleges and universities have a responsibility to take a leadership role in demonstrating that racial and ethnic diversity is an institutional, societal, and economic asset by fostering successful multicultural environments. Campuses must develop and implement strategic plans for diversity, and demonstrate progress in meeting these goals.

- Efficient and effective use of technology for instructional, educational delivery, research facilitation, and campus management must become a state priority. States and institutions should develop strategic long-term plans and provide funding for the use of new educational technologies.

- The global economy places new demands on higher education, and this requires a renegotiation of faculty roles. Faculty must make a commitment to addressing the goals of the new higher education agenda, and institutional leaders must provide a policy and work environment that encourages this commitment and participation.

Each of these recommendations suggests ways to improve the responsiveness of higher education to the demands which are being created by changing economic conditions.

Mexican policymakers and strategic thinkers also have responded to new economic challenges. Recognizing the critical problems faced by the nation, strategic thinkers have proposed a number of ways to reform the higher education system. The two primary objectives which have been identified by educational and economic reformers are (1) to improve educational quality, and (2) to respond to demands for the appropriate use of new educational technologies.

At the 1993 International Symposium on Higher Education and Strategic Partnerships in Vancouver, British Columbia, sponsored by the United States, Mexican, and Canadian federal governments, Mexico's Undersecretary for Higher Education at the time, Antonio Gago Huguet, reported on two key reform objectives. These are: "to increase the quality of teaching and research" and "to attend to the social demand for education and the demand of economic sectors for technology in a manner suitable to the modernization of the economic, political and social national development," (Gago, 1993).

The National Association of Universities and Institutions of Higher Education (ANUIES) has been involved in the coordination of a Council of Public Universities and Similar Institutions (CUPIA). This group has developed a series of recommendations including (ANUIES, 1989):

- a call for curriculum reforms to address professional development needs;
- improved faculty development programs;
- improved researcher development programs;
- a re-evaluation of the university's capacity to adequately meet demands created by changes in professional training needs, including technical training and life-long learning needs;
- administrative and financing reforms; and
- the encouragement of improved linkages with the business sector.

The Mexican federal government has recently established an innovative program to provide funding directly to higher education institutions to improve services in accord with priorities identified by ANUIES, such as the need for upgrading of faculty training.

Government Responses. In both the United States and Mexico, federal and state governments are actively engaged in finding ways to respond to new higher education opportunities created by NAFTA and the globalization process.

In Mexico, the Ministry of Education (SEP), working with the Organization for Economic Development and Cooperation (OECD), is preparing a background report on higher education in Mexico. A basic premise of this report is the importance of involving a variety of international experts in an evaluation of higher education policies in Mexico. The report will be completed within two years, and will evaluate higher education's responsiveness to new economic challenges.

The process of developing bilateral exchanges has begun with the creation of the U.S.-Mexico Commission for Educational and Cultural Exchange which administers Fulbright and Fulbright García-Robles grant scholarships for cultural and educational exchanges. The United States Department of Education (DOE) and the U.S. Information Agency (USIA) are working with the Mexican Ministry of Education and counterparts in Canada to fund new educational exchange programs, joint degree programs (e.g., a joint master's degree program in Applied

Economics has been developed cooperatively by San Diego State University, the Colegio de la Frontera Norte, and the University of Calgary, Alberta), telecommunications and distance education efforts (e.g., NADERN, the North American Distance Education and Research Network is planning an international congress which will probably be held in Mexico in 1996 for educational groups in the U.S., Mexico and Canada to discuss opportunities for collaboration), North American research centers, and informational services for students and faculty in the three nations. These are largely an outgrowth of a trilateral effort which has become known as the "Wingspread Initiative."

In 1993, the Institute of International Education (IIE) published an inventory[3] of trilateral and bilateral educational linkages between the three North American countries. Prepared for USIA's Office of Academic Programs, the inventory is a result of surveys conducted by IIE, the Association of Universities and Colleges of Canada (AUCC), and the Asociación Nacional de Universidades e Instituciones de Educación Superior (ANUIES). This effort was organized in response to "Wingspread" participants' requests for updated, accurate data to assist its Task Force in the development of a strategic action plan.

Public agencies such as CONACYT (National Council for Science and Technology—Consejo Nacional de Ciencia y Technología), also have played an important role in addressing new challenges raised by NAFTA[4]. CONACYT, an organization that has promoted the development of human resources capacities in Mexico primarily in the areas of science, technology, health, and engineering, has recently entered into an agreement with the U.S. National Science Foundation and the Canadian Council for Research in Natural Sciences and Engineering to establish a North American Scholarship Program. The three organizations signed the agreement in February 1994, and it is anticipated that the program will become effective in September 1995. The program will provide funding to doctoral students working on projects in the natural and social science fields, engineering, and other technical areas.

At the onset of the Mexican economic crisis in late December 1994, CONACYT was forced to reevaluate its priorities and restructure its programs. It is presently estimated that the CONACYT budget for 1995 will be 10 percent less (in real terms) than its 1994 budget. To sustain its commitment to increase specialized training of Mexican students in the United States and other countries, the

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[3] *North American Higher Education Cooperation: An Inventory of U.S.-Canada and U.S.-Mexico Academic Linkages*, available from the Institute for International Education.

[4] This information comes from an interview by the author with Adriana Martínez Glainso, Executive Coordinator, International Relations Office, CONACYT, December 15, 1994.

organization is currently exploring ways to diversify its sources of income, including further collaboration with the National Science Foundation; funding from private foundations, organizations and agencies with an interest in higher education and human capital development; and establishing more relationships with U.S. universities which have been supportive of its work in the past. CONACYT hopes to find U.S. higher education institutions willing to consider long-term agreements that may facilitate Mexicans pursuing advanced degrees at a lower cost. Mechanisms such as research and teaching assistantships are among the possibilities being discussed.

In response to emergency federal budget cuts and the devaluation of the peso, CONACYT's participant selection process for its scholarship and grant programs has become much more competitive. In addition, Mexican students currently participating in its programs are facing reduced living stipends.

State governments in Mexico and the United States also are playing an important role in responding to higher education challenges created by NAFTA. In the U.S., state governments and public universities are developing a wide range of bilateral and trilateral programs including tuition remission and placement service programs for students at universities in border regions (e.g., the University of Texas at El Paso), and bilateral student and faculty exchange programs (e.g., the University of Arizona). Local colleges, such as the Community College District of San Diego, also are implementing bilateral technical training programs. At the regional level, the Western Interstate Commission for Higher Education has developed a U.S.-Mexico Educational Interchange Project to improve collaboration between the two countries in the areas of teacher education, comparative research, leadership development, faculty development, and telecommunications.

Public and private universities in both countries have initiated numerous binational and international programs in response to NAFTA. Public institutions such as the Autonomous University of Baja California (UABC) and the University of California System, and private institutions such as the University of the Americas, A.C., based in Mexico City, have developed programs highly responsive to educational needs created by regional integration and global competition. The three public higher education institutions in Arizona (Arizona State University, Northern Arizona University, and the University of Arizona), along with the American School of International Management (Thunderbird campus) are pooling institutional resources and applying them to state and regional economic development efforts. The consortium has worked to establish cooperative ventures with several institutions in Sonora. Their efforts have included producing a joint study of the transportation and communication channels between the states of

Sonora and Arizona for the development of a regional trade corridor. Supporting this effort are studies of border economic indicators (for the entire border region between California and El Paso, Texas) published by the University of Arizona.

Responses from the Private Sector. How will the new economy affect business needs for higher education services?

During the first nine months of the Accord, Mexican-U.S. trade has grown in sectors such as auto parts and automobiles, telecommunications equipment, oil, plastics, and a variety of other manufactured products. Business growth and economic changes create the need for well-trained and flexible human resources capabilities in both nations. In Mexico, educational training needs are critically important because less than 60 percent of the population completes the sixth grade, and only 5 percent finish college.

The business sector, as well as government agencies, have begun to respond to the challenge of improving workforce training capabilities. Carlos Machorro, President and Director General of Gates Rubber de México, says his company views the opening of the borders created by NAFTA, GATT and other trade agreements as a challenge to improve personnel knowledge and skills. Gates Rubber de México has created a program in Mexico to train all of its workers to ensure that they achieve the equivalent of a 12th grade education. The training program was initiated in recognition of the critical importance of highly trained employees who can respond to new challenges and competition promoted by new production processes and technologies. According to Machorro, "there is no way that we can compete in the old ways."[5]

Gates has worked closely with Mexico's National Institute for Adult Education to develop in-house training programs. The company hires its own instructors and applies for and receives certification for its educational programs from SEP. The company also works closely with public and private universities in Mexico to provide higher education opportunities to employees. Machorro sees a complete change in attitude toward business education needs, and a recognition of the need to fill the wide gap between the interests of the public universities and the needs of business. He said that this turnaround has occurred largely in response to challenges created by NAFTA and the realities of global competition.

[5] This information comes from the author's telephone interview with Carlos Machorro, Director General and President of Gates Rubber Company, Mexico City, December 15, 1994.

Companies in Mexico are developing intensive educational training programs because they recognize this as one of the key strategies for becoming competitive in the current marketplace. To improve the management skills of its personnel, the Gigante supermarket chain in Mexico has provided employees with business training offered through a special program developed by Southwestern Community College based in San Diego, California. The maquiladora industries in the border region also have become increasingly concerned about making sure that their personnel receive adequate basic and higher education training, not just to increase productivity, but also to improve the general education competencies of employees.

Some universities in Mexico, such as the Autonomous University of Baja California (UABC), have developed innovative ways to work with businesses. It has developed the *vinculación* (linkages) program which is geared to meeting market demands, provides a balance between higher education theory and practice, and combines educational training and internships with other types of practical job training approaches that cannot be provided in classroom settings (WICHE, 1994).

How NAFTA Applies to Higher Education in the U.S. and Mexico

NAFTA creates a market of 360 million individuals in three countries and a combined GDP of $6.2 trillion. It proposes to eliminate, by 2008, all tariffs on roughly 9,000 categories of goods produced and sold in North America. The Agreement also eliminates barriers to trade in the areas of services, investments, and intellectual property. NAFTA contains provisions to protect certain sensitive sectors through prolonged phase-in periods or draw-back mechanisms, and it creates trilateral and bilateral dispute resolution mechanisms for resolving conflicts which cannot be settled through other means.

This section briefly describes NAFTA provisions which apply to higher education in the United States and Mexico. Although education is not the focus of these provisions, education will be affected by Chapter 12 (Cross-Border Trade in Services), (Licensure and Certification), Chapter 16 (Temporary Entry for Businesspersons), and Chapter 17 (Intellectual Property).

NAFTA regulates services provided by Canada, Mexico, and the United States. In NAFTA, education is regarded as a service, and to the extent that public higher education institutions (state or federal) act on behalf of the three governments, they are subject to the provisions of the Agreement. Private colleges and universities are exempt from NAFTA regulation. Exceptions would exist in cases where private institutions receive public funds for services.

NAFTA does not change the immigration laws of the three countries, so it has no major impact on the flow of educational service providers across borders (except in the case of temporary entry for business purposes); it also has no impact on the immigration policies affecting students. Programs that would affect the flow of higher education service providers and consumers (e.g., new educational exchange programs) might emerge in response to NAFTA, but they are not provided for in the Agreement.

In cases where states and provincial governments enforce stricter standards than the federal governments, NAFTA respects state and provincial regulations. Licensing, for example, is handled primarily by state and provincial governments in the U.S. and Canada, but by the federal government in Mexico.

Cross-Border Trade in Services. Under Chapter 12 of the Agreement, higher education service providers (e.g., professors, academic administrators, and technical trainers) are granted national treatment and most-favored nation treatment by the three governments. In other words, each government must treat these individuals according to the same contract, salary, and benefit policies that apply to the country's domestic service providers and all other international service providers. The impact of this provision on academic mobility and faculty exchanges is not clear.

Licensure and Certification. Annex 1210.5 of NAFTA encourages organizations within each country to develop and recommend mutually acceptable standards and criteria for the licensure and certification of professional service providers. The Agreement stipulates that licensing and certification standards should be based on merit, and not on the national origin of service providers.

The process toward achieving this objective has been initiated by several professional associations. The Center for Quality Assurance in International Education, based in Washington, D.C., has taken the leadership role in bringing together representatives of various professional associations to discuss the development of common standards. Considerable success toward a very difficult objective already has been achieved by the professional associations for accounting, architecture, dentistry, engineering, and law. However, in some areas, such as teacher certification, very little progress has been made.

Labor issues. Chapter 16 concerns the temporary entry of businesspersons. It sets up four categories of temporary migrants, including higher education service providers, who may enter each country to work on a temporary basis if they meet minimum education and licensing requirements described in the Agreement.

Certain requirements that apply to Mexicans do not apply to Canadians. For example, the number of Mexicans who may enter the United States under Chapter 16 is restricted to 5,500 individuals per year, while no such limitation is applied to Canadians. Numerical limits for Mexican temporary workers will be in place for 10 years unless the United States and Mexico agree to remove such limits earlier.

Intellectual Property. Chapter 17 provides protections for intellectual property rights, and the Agreement establishes dispute resolution mechanisms to resolve conflicts and ensure the enforcement of such provisions. This is an important issue for higher education because professionals in the three nations are becoming increasingly concerned about the need to protect copyrights and patents.

Labor and Environmental Supplemental Agreements. Labor and environmental sections are included as supplements to the Agreement. The labor section does not refer directly to the role of higher education. However it does establish a National Administrative Office (NAO) in each country to deal with NAFTA-related labor issues. Complaints about unfair labor practices may be filed in NAO offices.

The environment section has an indirect but potentially greater impact because of the critical need for improved environmental education and training services in the three nations.

Issues for Further Consideration

As economic conditions and business needs change as a result of NAFTA and a changing economy, higher education will play a critical role in providing job training, upgrading human resources capabilities, and educating new entrants into the workforce. Several important initiatives are already underway to encourage improved cooperation between colleges and universities in Mexico and the United States. Increased cooperation must continue to be encouraged. For the future, higher education policymakers in the United States and Mexico need to give careful consideration to the following issues:

1. **Better Integration of Educational Systems.** The governments of the United States and Mexico are exploring opportunities for increasing the integration of the higher education systems in the two countries through agreements to support student and faculty exchanges, joint degree programs, and other activities such as telecommunications and distance education linkages. Key issues include accreditation and enhanced compatibility of programs, e.g. prerequisite requirements for enrolling in courses and acceptance of credits from a university in one country towards a degree in another country (Ganster, 1991). Better integration will open opportunities for students to take courses in both countries, and to receive appropriate credit for these studies. The development of joint degree programs in specialized areas such as education and economics will enhance the learning opportunities for understanding global concerns.

2. **Support for Flexible and Cross-Border Technical Training and Adult Education Programs.** With increased interdependency among the United States, Mexican, and Canadian economies, new job opportunities will be created in each country, heightening the demand for improved technical training and adult education programs as workers seek to upgrade their employment skills. To the extent possible, policymakers in each country should support the development of flexible technical and adult education training programs, funded by federal and state governments, in coordination with the business sector. Additionally, cross border programs involving institutions in both countries should be supported.

3. **Improved Cooperation with the Business Sector.** Governments and higher education institutions in Mexico and the United States should support the development of collaborative programs with business to respond effectively to emerging needs in the global market. Business leaders can advise higher education on the educational outcomes that are needed. A forum is needed for higher education policymakers and business leaders from both countries to discuss industry's changing needs, and ways that higher education might address these needs more effectively.

4. **Efficient and Effective Use of New Educational Technologies.** The efficient and effective use of new technologies for instruction, educational delivery, research, and campus management should be a top priority in both countries. In particular, opportunities for improved distance education linkages should be explored. Mexico has a critical need for graduate degree programs because less than 5 percent of Mexican faculty have Ph.D. degrees. Distance education programs can provide improved training for faculty who might not otherwise have access to educational programs in specialized areas. Exchanges made possible through technology offer efficient approaches to internationalizing the curriculum.

   Electronic communications linkages such as the Internet provide instant access to information throughout the world. Increased use of technologies should be encouraged; students, faculty, and scholars need to be trained to use these systems effectively.

5. **The Role of Faculty.** Faculty exchange programs are an efficient and effective approach to internationalizing the curriculum and campus environments in both countries and to providing graduate education for Mexican faculty members.

6. **Language and Area Studies Support.** North American studies centers are needed, and initiatives for their development should be supported by governments and universities in the three countries. Encouraging North American and Latin American area and language studies is another high priority. It is also important to provide support for programs focusing on U.S.-Mexican border area studies.

7. **Improved Cross-Border Networking Mechanisms.** Efforts to promote binational educational exchange thus far have developed largely on an institution-to-institution basis. Regional umbrella organizations are needed to promote a more systemic, strategic plan for educational cooperation across the border. Educational leaders and policymakers must be brought together to jointly examine key issues and identify strategies for response. Seminars and electronic networks are possible ways to establish and maintain ongoing dialogue for collaboration and increased educational interchange of faculty and students.

Bibliography

Alvarez de Testa, Lilian. *Higher Education in Mexico, Basis for a Mexico-U.S. Comparative Report*. Instituto de Investigaciones Filológicas, Universidad Autónoma de México, October 1994.

Asociación Nacional de Universidades e Instituciones de Educación Superior (ANUIES). *Avances de la Universidad Pública en México*. Revista de la Educación Superior. Mexico City: Asociación Nacional de Universidades e Instituciones de Educación Superior, no. 89, enero-marzo 1989, 205-226.

Ashworth, Kenneth H. *Scholars and Statesmen: Higher Education and Government Policy*. San Francisco: Jossey-Bass, 1972.

Burns, James MacGregor, et al. *State and Local Politics: Government by the People*. N.J.: Prentice Hall, 1993.

The Center for Quality Assurance in International Education. "Globalization of Higher Education and the Professions: The Mobility of Students, Scholars and Professionals." Conference proceedings, Tucson, Arizona, January 1993.

———. "The Globalization of Higher Education and the Professions: The Case of North America." Linkage initiative and conference summary, December 1993.

Coulter, Brian H. and Delavar G. Shenas. "NAFTA's Impact on Higher Education, Some Canadian Perspectives." Paper presented at an international conference sponsored by San Diego State University, on "Shaping the Role of the Border University in the NAFTA Era," Calexico, California, November 1994.

Crutsinger, Martin. "Clinton Says GATT Can't Wait," *San Diego Union Tribune*, 9 November 1994, A5.

DeLoughry, Thomas J. "The Higher Education Amendments of 1992: What They Mean for Colleges and Students." *Chronicle of Higher Education*, 5 August 1992, A-20.

Foust, Dean, et al. "Anatomy of a Rescue Mission." *Business Week*, 13 February 1995, 33.

Gago Huguet, Antonio. "Higher Education in Mexico and the North American Dimension." Paper presented at *An International Symposium on Higher Education and Strategic Partnerships: The Challenge of Global Competitiveness from a North American Perspective*, Vancouver, British Columbia, September 1993.

Ganster, Paul, "Education, the Border Region, and U.S.-Mexican Free Trade." Rocky Mountain Council for Latin American Studies Proceedings, 1991.

Glenny, Lyman, and Frank Schmidtlein. "The Role of the State in the Governance of Higher Education." *Educational Evaluation and Policy Analysis* 5. (1983): 133-135.

Graham, High Davis. "Structure and Governance in American Higher Education: Historical and Comparative Analysis in State Policy." *Journal of Policy History* 1, (1989): 80-107.

Hines, Edward R. "Higher Education and State Governments: Renewed Partnership, Cooperation, or Competition?" *ASHE-ERIC Higher Education Report*, No. 5. Washington, D.C.: Association for the Study of Higher Education, 1988.

"International Symposium on Higher Education and Strategic Partnerships: The Challenge of Global Competitiveness from a North American Perspective," Vancouver, British Columbia, September 1993.

Keller, George. *Academic Strategy: The Management Revolution in Higher Education*. Baltimore: Johns Hopkins University Press, 1983.

Keppel, Francis. "The Higher Education Acts Contrasted, 1965-1986: Has Federal Policy Come of Age?" *Harvard Educational Review* 57 (February 1987): 49-67.

Leveson, Irving. *American Challenges*. New York: Praegar Publishers, 1991.

Levy, Daniel C. *University and Government in Mexico*. New York: Praegar Scientific, 1980.

Lewis, Finlay. "Miami Summit Ends with Bold Goals on Trade." *San Diego Union-Tribune*, 12 December 1994, A-5.

Lorey, David. *The University System and Economic Development in Mexico Since 1929.* Stanford: Stanford University Press, 1993.

Lustig, Nora. *Mexico, the Remaking of an Economy.* Washington, D.C.: The Brookings Institution, 1992.

National Commission on Responsibilities for Financing Postsecondary Education. "Making College Affordable Again." February 1993.

Newman, Frank. *Higher Education and the American Resurgence.* A Carnegie Foundation special report. Lawrenceville, N.J.: Princeton University Press, 1985.

Ogden, Christopher. "Ready, Willing, Able?" *Time International*, 12 December 1994, 50, 15.

Peace Lynn, Marjorie. "Quality Assurance, Higher Education and the Professions: A Global Tour." Paper presented at the international conference *Globalization of Higher Education and the Professions: The Case of North America*, Cancun, Mexico, May 1994.

Riley, Richard W. "One Thing Leads to Another," presented at the annual meeting of the Education Commission of the States, Honolulu, Hawaii, July 1994.

Serrill, Michael. "Good Vibrations." *Time International*, 12 December 1994, 50, 17.

Shehan, John. *Conflict and Change in Mexican Economic Strategy.* San Diego: Center for U.S.-Mexican Studies, University of California, 34, 1991.

U.S. Department of Commerce. "NAFTA: First Year Snapshot". Washington, D.C.: International Trade Administration, NAFTA Office, 17 February 1995.

U.S. Department of Commerce. *NAFTA Facts.* Washington, D.C.: International Trade Administration, NAFTA Office, No. 8101, 31 March 1995.

U.S. Department of Trade. *The North American Free Trade Agreement between the Government of the United States of America, the Government of Canada and the Government of the United Mexican States*, Volumes I & II. Washington, D.C.: U.S. Government Printing Office, 1992.

U.S. Department of Trade. *The NAFTA Supplemental Agreements, North American Agreement on Labor Cooperation*. Washington, D.C.: U.S. Government Printing Office, 1993.

Western Interstate Commission for Higher Education (WICHE). *Avenues for Cooperation, A WICHE/Mexico Meeting to Strengthen Higher Education Collaboration,* April 23-24, 1993, Monterrey, Mexico. Boulder, CO: Western Interstate Commission for Higher Education, 1993.

———. *Exploring the Relationship: A Survey of the Literature on Higher Education and the Economy. Working Paper #2.* Boulder, CO: Western Interstate Commission for Higher Education, November, 1992.

———. *The Higher Education-Economy Tie: A Sampling of Exemplary Programs in the West.* Boulder, CO: Western Interstate Commission for Higher Education, August 1992.

———. *Insights on the Higher Education-Economy Relationship: Interviews with the Stakeholders.* Boulder, CO: Western Interstate Commission for Higher Education, August 1992.

———. *Leading the Way: Leadership Perspectives on Creating Binational Programs in Higher Education. Executive Summary of the WICHE/AMPEI Educational Leadership Seminar*, Ensenada, Baja California, Mexico, May 1994. Boulder, CO: Western Interstate Commission for Higher Education, 1994.

———. *Meeting Economic and Social Challenges, A Strategic Agenda for Higher Education.* Boulder, CO: Western Interstate Commission for Higher Education, October 1992.

Vernon, Raymond. "Same Planet, Different Worlds," *The Global Economy: America's Role in the Decade Ahead.* Edited by William E. Brock and Robert Hormats. New York: W.W. Norton, 1990.

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